

**Bachelor of Science in Engineering with a major in Industrial and Systems Engineering**

**Major Requirements**

| Oakland University Courses   | Montcalm Community College Courses            |
|--|---|
| MTH 1554   | MATH 250                                      |
| MTH 1555   | MATH 251                                      |
| MTH 2554   | MATH 252                                      |
| APM 2555   | Satisfied at OU                               |
| PHY 1610   | PHYS 230 accepted                             |
| PHY 1620   | PHYS 231 accepted                             |
| CHM 1440 and 1470  | CHEM 220                                      |
| Economics Requirement  | ECON 215 or 216                               |
| Choose <b>one</b> Approved Math and Science Elective<br>(students encouraged to select with an OU adviser) | BIOL 121; BIOL 122; (BIOL 202 <b>and</b> 203) |

**\*Consider transfer credit limits (64 credits) when following this major guide**

**TRANSFERRING WITH THE MICHIGAN TRANSFER AGREEMENT (MTA):**

When choosing to complete MTA to satisfy General Education, please confirm the best courses to take to fulfill the agreement with your academic adviser at Montcalm or at the [Montcalm MTA Approved Courses](#) website. Completing MTA when following this major guide will satisfy OU's transferable General Education requirements.

**Additional course requirements for MTA when following this major guide  
(minimum 30 credit hours required for MTA):**

- ENGL 100
- ENGL 101 (required prerequisite for coursework at OU)
- One MTA Approved Social Science course
- Two MTA Approved Humanities courses

**TRANSFERRING WITHOUT MTA:**

If you intend to transfer without MTA, you can choose to complete additional coursework to fulfill OU's individual General Education categories instead. When following this major guide, please reference the [Montcalm General Education Transfer Guide](#) for the Montcalm courses that satisfy these specific OU General Education categories:

- Writing Foundations (ENGL 101)
- Arts
- Foreign Language and Culture
- Global Perspective
- Literature
- U.S. Diversity

All prospective students should call the School of Engineering and Computer Science (SECS) Academic Advising Office at (248) 370-2201 to schedule an appointment. Their office can also be contacted by email at [secsadvising@oakland.edu](mailto:secsadvising@oakland.edu), or visit their [website](#) for more information.

## **NOTES:**

Transfer students are admitted directly to the major if they have a cumulative GPA of 2.8 or higher, if students have a GPA between 2.5 and 2.79, they are admitted as a “Candidate” to the SECS, and will need to meet established criteria to change their major.

Students apply for major standing once they have completed math, science, and core engineering courses.

Oakland University will always honor the **MACRAO transfer agreement** and apply it to the General Education requirement the same as MTA.

## **SCHOOL OF ENGINEERING AND COMPUTER SCIENCE (SECS) TALKING POINTS:**

Learn more about OU's [ABET accredited programs](#): (Mechanical Engineering, Computer Engineering, Electrical Engineering, Industrial & Systems Engineering, Information Technology and Computer Science)

83% of SECS graduates from the 2017-2018 academic year completed an internship. The overall placement rate of SECS graduates from the 2017-2018 academic year was 95%. [See why some of our students and alumni chose SECS.](#)

Learn about ways to [get involved](#) in over 20 student organizations affiliated with SECS, as well as different professional organizations related to careers in engineering and computer science!

Participate in competitions such as Intelligent Ground Vehicle (hosted at OU in June 2020), Formula SAE (the [team](#) traveled to Germany in 2019), North American International Auto Show in Detroit, GrizzHacks, and Maker Faire Detroit.

OU offers a number of [scholarship opportunities](#) to students in the School of Engineering and Computer Science to help pay for your education.

The School of Engineering and Computer Science offers a wide variety of [opportunities for undergraduate research](#).

Oakland University was [selected to host an accessible autonomous shuttle on campus](#) as part of the EasyMile collaboration with partners Continental and the City of Auburn Hills. Faculty and students will be able to participate.

SECS students can work with a career consultant about your resume, job search or to practice your interviewing skills. There are also a number of networking events each month and [resources available through Career Services](#). Employers from hundreds of companies participate in our annual Engineering and IT Career Fair in search of Oakland students to fill internship and full-time opportunities.

Oakland University was [designated as a National Center of Academic Excellence in Cyber Defense Education \(CAE-CDE\)](#) in 2018.

The efforts of the Industrial Systems and Engineering Department to integrate Product Lifecycle Management (PLM) concepts, techniques, and tools into its curriculum were [highlighted in a textbook about PLM](#), reflecting the program's high quality and innovative nature.